

### Title : Optimal seeding rates for sustainable cotton production in Côte d'Ivoire

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### Background

In all cotton-growing areas of Côte d'Ivoire, sowing densities are not those recommended by research and development services.

### Objective

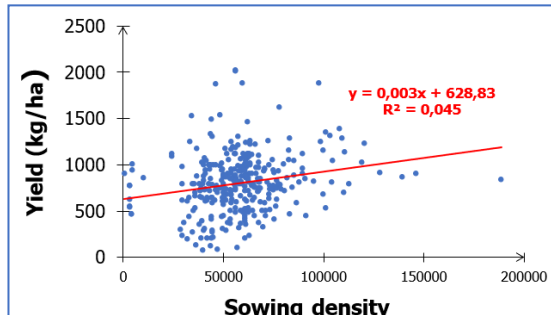
The aim was therefore to assess the effects of seeding rates observed by farmers on their seedcotton yields.

### Methodology

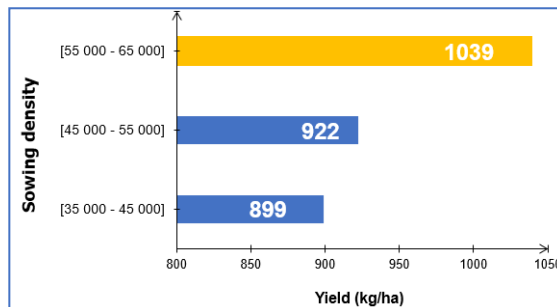
- ▶ A survey was carried out among 500 growers in 10 localities of each of the main cotton companies (COIC, SECO, Ivoire Coton, CIDT and Global Cotton).
- ▶ Plants and seedcotton yield were counted, and a regression analysis was carried out to identify the relationship between the two parameters.
- ▶ ANOVA was performed to highlight the impact of sowing density on seed cotton yield.

### Results

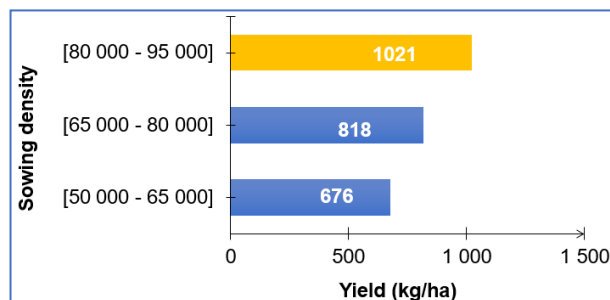
- ▶ A positive and significant relationship was observed between yield and sowing density



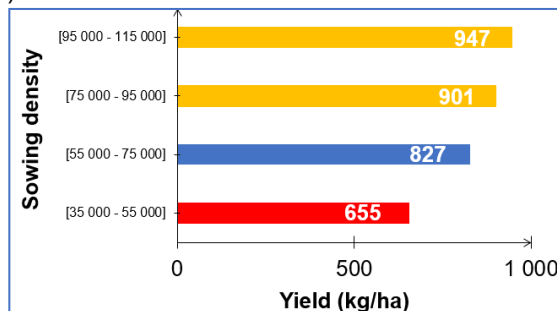
- ▶ The highest yield, 1,039 kg/ha, was observed at COIC at densities between 55,000 and 65,000 plants/ha



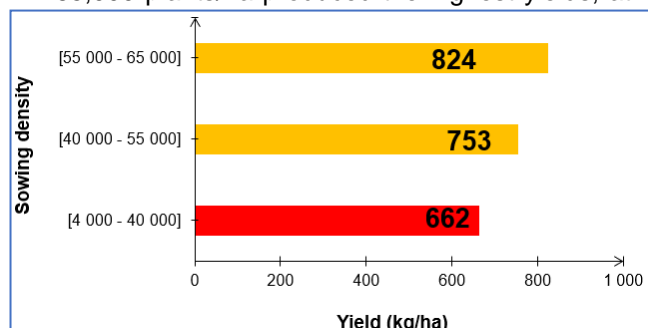
- ▶ In the SECO area, densities of 80,000 to 95,000 plants/ha produced the highest yields, at 1,021 kg/ha.



- ▶ High sowing densities ranging from 95,000 to 115,000 plants/ha were the most productive (947 kg/ha) at Ivoire Coton.



- ▶ In the southern part of the cotton basin (CIDT area), sowing densities of between 55,000 and 65,000 plants/ha produced the highest yields, at



### Conclusion

This study shows that in the north of the cotton basin, where the climate is drier, high densities are needed, whereas in the south, where the climate is wetter, medium densities are needed to guarantee good cotton production in Côte d'Ivoire.